ABSTRACT OF THE DISCLOSURE

[135] An approach is provided for supporting retrieval of a web page over a data network from a web site is disclosed. A downstream proxy communicating with a host executing a browser receives a request message from a browser to retrieve the web page. An upstream proxy parses the web page to determine an object embedded in the web page, wherein a promise list is generated specifying the embedded object that is to be pre-fetched according to a criterion. The promise list is transmitted to the downstream proxy, wherein the upstream proxy pre-fetches the embedded object from the web site. The upstream proxy determines whether to forward one of the pre-fetched embedded object to the downstream proxy based on a comparison of cookies associated with one of the pre-fetched objects supplied, respectively, by the browser and the web site. This approach as particular applicability in relatively high latency networks, such as a satellite communications system.